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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/034,985	12/21/2001	Jay M. Short	DIVER1370-8	9024

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MORRISON & FOERSTER LLP
12531 HIGH BLUFF DRIVE
SUITE 100
SAN DIEGO, CA 92130-2040

EXAMINER

RAMIREZ, DELIA M

ART UNIT	PAPER NUMBER
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1652

DATE MAILED: 10/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/034,985	Applicant(s) SHORT, JAY M.	
	Examiner Delia M. Ramirez	Art Unit 1652	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 July 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 8-28,30,31,33-41,44,46,48-59,64 and 66-72 is/are pending in the application.
- 4a) Of the above claim(s) 15-18,59,69 and 70 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 8-14,19-28,30,31,33-41,44,46,48-58,64,66-68,71 and 72 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>7/11/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Status of the Application

Claims 8-28, 30-31, 33-41, 44, 46, 48-59, 64 and 66-72 are pending.

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 7/11/2006 has been entered.

Applicant's amendment of claims 8, 12-20, 24, 30, 34, 40, 49, 52, 54, -55, 57-59, 66, addition of claims 67-72, and cancellation of claims 29, 60-63, 65 as submitted in a communication filed on 7/11/2006 is acknowledged.

As indicated in the Final action of 1/11/2006, claims 15-18 and 59 were withdrawn from further consideration by the Examiner, 37 CFR 1.142(b), as being drawn to an invention non-elected without traverse in a communication filed on 2/24/2005. New claims 69 and 70 are directed to a non-elected invention and are withdrawn from consideration by the Examiner. Claims 8-14, 19-28, 30-31, 33-41, 44, 46, 48-58, 64, 66-68, 71-72 are under consideration and are being examined herein.

Rejections and/or objections not reiterated from previous office actions are hereby withdrawn.

Information Disclosure Statement

1. The information disclosure statement (IDS) submitted on 7/11/2006 is acknowledged. However, it is noted that the references cited in the Search Report issued by the European Patent Office on October 7, 2005 for EP 05 01 3009 and the supplemental Search Report issued by the European Patent Office on April 4, 2006 for EP 02 74 4174 which have not been provided on a separate list in compliance with 37 CFR 1.98(a)(1), or have not been cited by the Examiner in a PTO-892 form, will not be listed on any

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patent resulting from this application. In order to have the references printed on such resulting patent, a separate listing, preferably on a PTO/SB/08A and 08B form, must be filed within the set period for reply to this Office action.

Specification

2. The disclosure is objected to because it contains embedded hyperlinks and/or other forms of browser-executable code. See, for example, page 26, line 3-6, page 28, line 2. Applicant is required to delete the embedded hyperlinks and/or other forms of browser-executable code. See MPEP § 608.01.

Priority

3. As previously indicated in the Office Action mailed on 1/11/2006, a sequence search showed that SEQ ID NO: 2, as disclosed in the sequence listing, was first disclosed in U.S. Application No. 09/259,214 filed on 03/01/1999. Upon performing an alignment of SEQ ID NO: 2 of the instant application and the sequence disclosed in the sequence listing of parent application 08/910798 as SEQ ID NO: 2, it was found that what has been disclosed as SEQ ID NO: 2 in the sequence listing of the priority application is not the same as SEQ ID NO: 2 of the instant application. Applicant argued that SEQ ID NO: 2 as disclosed in the instant application was first disclosed in Figure 1A and 1B of U.S. Patent No. 5876997 (issued from application No. 08/910798 filed on 8/13/1997). Thus, Applicant submitted that the claimed invention can properly claim priority to parent application 08/910798, filed on 8/13/1997. While visual inspection of Figure 1A and 1B of U.S. Patent No. 5876997 appears to show a polypeptide having the same number of amino acids as that of the polypeptide of SEQ ID NO: 2 of the instant application, the Examiner could not rely solely on visual inspection to determine whether the sequence disclosed in Figure 1A and 1B of U.S. Patent No. 5876997 is the same as SEQ ID NO: 2 of the instant application.

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4. In the response filed on 7/11/2006, Applicant has provided an alignment which Applicant asserts is an alignment of the sequence disclosed in Figure 1A and 1B of U.S. Patent No. 5876997 and SEQ ID NO: 2 of the instant application. Applicant also submits an alignment of the nucleotide sequence of the polynucleotide of SEQ ID NO: 1 of the instant application and the nucleotide sequence disclosed in Figure 1A and 1B of U.S. Patent No. 5876997 and asserts that while nucleotides 214-216 of SEQ ID NO: 1 show "CGN", this codon has been translated as Arg since CGN can only encode this amino acid residue.

5. Applicant's submission has been fully considered. In view of Applicant's alignment and assertion that such alignment contains the sequences disclosed in Figure 1A and 1B of U.S. Patent No. 5876997 and SEQ ID NO: 1 and SEQ ID NO: 2 of the instant application, the priority date granted to claims directed to the polypeptide of SEQ ID NO: 2 of the instant application is the filing date of parent application No. 08/910798, which is 8/13/1997.

Claim Rejections - 35 USC § 112, Second Paragraph

6. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

7. Claims 8-11, 19, 23-28, 30-31, 33-41, 46, 48, 50-53, 56-57, 64, 67-68, 71-72 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

8. Claims 8, 19, 24 (claims 9-11, 23, 24-28, 30-31, 33-41, 46, 48, 50-53, 56-57, 64, 67, 71, 72 dependent thereon) are indefinite in the recitation of "nucleic acid isolated from an *E. coli*, or a synthetic or recombinant form thereof" for the following reasons. As written, it is unclear whether the nucleic acid is a nucleic acid isolated from a naturally-occurring *E. coli* or if the nucleic acid is any nucleic acid encoding a phytase which is found in any recombinant *E. coli*. It is noted that the term "recombinant

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form thereof” can refer to *E. coli* as well as the nucleic acid. Thus, a recombinant form of the *E. coli* cell can comprise a nucleic acid inserted in that *E. coli* cell wherein the nucleic acid is originally from a different organism. If the intended nucleic acid is one isolated from naturally-occurring *E. coli*, the term should be amended to recite, for example, “nucleic acid isolated from *E. coli*” or “*E. coli* nucleic acid”. For examination purposes, it will be assumed that the term encompasses phytase-encoding nucleic acids isolated from naturally-occurring *E. coli* as well as phytase-encoding nucleic acids isolated from other organisms and introduced in an *E. coli* cell. Correction is required.

9. Claims 67-68 and 71-72 are indefinite in the recitation of “phytase comprises a sequence (a) lacking a homologous ..signal peptide..., (b) lacking a homologous ...signal peptide.... and comprising a heterologous signal peptide..., or (c) comprising (a) or (b) and a heterologous sequence, or (d) comprising (a), (b), or (c) and encoded by a polynucleotide...” for the following reasons. As written, it appears that item (c) refers to a fusion protein comprising a phytase due to the recitation of “heterologous sequence”. However, since the preamble recites “a phytase comprises a sequence (a)....(b)....(c)..., it is unclear how the phytase would comprise a fusion protein since the fusion protein would be larger than the phytase. Also, item (c) is unclear and confusing because even if the intended scope is a fusion protein, as written, one cannot determine whether item (c) refers to a fusion protein comprising either the phytase without its signal peptide, or the phytase with a heterologous signal peptide. The term “and encoded by a polynucleotide comprising....” is also unclear and confusing because one cannot determine whether the term is a limitation for all (a)-(d) or if it only applies to item (d). If the term is meant to limit only item (d), it is unclear as to what is encompassed by a phytase that comprises (c) and is encoded by the recited polynucleotide. For examination purposes, it will be assumed that the phytase is selected from the group consisting of (1) the phytase of claim 8 lacking a homologous signal peptide, (2) the phytase of claim 8 comprising a heterologous signal peptide and lacking a homologous signal peptide, (3) the phytase of (1) or (2) encoded by a polynucleotide comprising the nucleic acid of (i)...., or (4) the phytase of (1) or (2)

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wherein the phytase has the amino acid sequence of (i) SEQ ID NO:2 lacking amino acids 1-22, or (ii) amino acids 23-432 of SEQ ID NO:2. Correction is required.

Claim Rejections - 35 USC § 112, First Paragraph

10. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

11. Claim 34 was rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement as containing new matter. This rejection has been discussed at length in the Non Final action mailed on 5/18/2005 and the Final action mailed on 1/11/2006.

12. Applicant argues that support for the genus of *Bacillus* cells recited in claim 34 is found in paragraph [0194] of the specification. In view of the fact that the specification refers to *Bacillus* cells as host of interest in the specification, this rejection is hereby withdrawn.

13. Claims 8-11, 19, 23-28, 30-31, 33-41, 46, 48, 50-53, 56-57, 64 remain rejected and new claims 67, 71-72 are rejected under 35 USC 112, first paragraph, written description and scope of enablement. These rejections have been discussed at length in the Non Final action mailed on 5/18/2005 and 1/11/2006.

14. Applicant argues that the amendment to the claims clarifies that the *E. coli* phytases used do not encompass an open-ended genus of enzymes.

15. Applicant's arguments have been fully considered. The examiner acknowledges the amendments to the claims. However, as indicated above, the amended claims as interpreted still encompass an open-ended genus of enzymes (i.e., any phytase encoded by a nucleic acid isolated from a recombinant *E. coli* cell). See Claim Rejections under 35 USC 112, second paragraph for claim interpretation. Thus, these

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rejections are maintained for the reasons of record and are applied to new claims 67, 71-72 for the reasons of record.

Claim Rejections - 35 USC § 102

16. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

17. Applicant's traverse a previous rejection of claims 8-13, 19, 23, 26-31, 33-40 under 35 U.S.C. 102(b) as being anticipated by Apajalahti et al. (GB 2316082 A, published 2/18/1998). It is noted, however, that this rejection was withdrawn in the Final action mailed on 1/11/2006. See page 9, last paragraph of that Office action.

Claim Rejections - 35 USC § 103

18. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

19. Claims 8-11, 13, 19, 23-28, 30-31, 33-40, 50-53, 56-57, 64 remain rejected and new claims 67-68, 71-72 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cheng et al. (U.S. Patent No. 5939303 filed on 11/6/1996, issued 8/17/1999; cited in the IDS) in view of Greiner et al. (Archives of Biochemistry and Biophysics 303(1):107-113, 1993; cited in the IDS). This rejection has been discussed at length in the Final action mailed on 1/11/2006. It is now applied to new claims 67-68 and 71-72 for the reasons of record and those set forth below.

20. It is noted that due to a typographical error, claim 12 was inadvertently included in the list of rejected claims. Similarly, while the examiner discussed how the rejection applied to claim 23 (see page 12, lines 3-5 of that Office action), due to a typographical error, claim 23 was omitted from the list of rejected claims as shown on page 11, item 32. The examiner regrets any confusion this may have caused.

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21. Applicant traverses the rejection on the grounds that Cheng et al. do not teach an *E. coli* phytase or the use of an *E. coli* phytase in a feed or food. Applicant argues that since Greiner does not teach the food or feed composition of Cheng et al., the combination of these references do not teach/suggest the instant claimed invention. In addition, applicant has submitted a declaration by Dr. Nelson Barton, an employee of the assignee of record (DIVERSA Corporation), as evidence of secondary indicia of nonobviousness. According to Dr. Barton, at the time of the invention, there was a long-felt need in the food, agricultural and biotech industry for an invention such as that of the instant claims. Dr. Barton declares that this long-felt need is evidenced by the commercial success of DIVERSA's PHYZYME, which is a product containing an *E. coli* phytase. Dr. Barton asserts that this invention was the first to exploit the unique properties of this phytase in a food or feed, particularly the fact that it operates at a low pH and has better enzymatic activity at a lower pH than other known phytases. According to Dr. Barton, other food and feed enzyme companies realized the value of this discovery after the priority date of this application, and that it was this invention that for the first time used an *E. coli* phytase in a food or feed.

22. Applicant's arguments have been fully considered but are not deemed persuasive to overcome this rejection. New claims 67-68 and 71-72 as interpreted encompass in part the subject matter of claims 8, 13, 19 and 24 with the added limitation that the phytase lacks a signal peptide, which is the same limitation of claim 53, previously discussed. With regard to arguments that the teachings of Cheng et al. and Greiner et al. do not render the claimed invention obvious, it is noted that while it is agreed that Cheng et al. do not teach an *E. coli* phytase in a feed or food, this limitation is clearly taught by Greiner et al. Cheng et al. disclose all the required limitations with the exception of the *E. coli* phytase and a juice comprising a phytase. As previously indicated, Greiner et al. clearly teach the potential use of the *E. coli* phytase in a food/feed composition and the advantages of such composition. At the time the invention was made, the functional properties of the *E. coli* phytase were known. This is also acknowledged by Dr. Barton in his declaration. Since the functional properties of the *E. coli* phytase were known and the use

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of phytases in food/feed compositions was well known in the art, the combined teachings of Cheng et al. and Greiner et al. clearly render the claimed invention obvious to one of ordinary skill in the art.

The examiner acknowledges Dr. Barton's declaration. However, the examiner disagrees with applicant's contention that Dr. Barton's declaration as evidence of secondary indicia of nonobviousness is sufficient to overcome the instant rejection. Dr. Barton's arguments regarding the importance and commercial success of PHYZYME are based on the functional characteristics of the *E. coli* phytase, particularly its higher enzymatic activity at low pH. While these arguments could have been convincing if these properties would have been unknown at the time the invention was made, as admitted by applicant and also known in the art, these functional characteristics were well known at the time the invention was made. Thus, not only one of skill in the art would have found motivation to use the *E. coli* phytase in a food/feed composition as claimed but, as indicated previously, one of skill in the art would have a reasonable expectation of success at using this phytase in a food/feed composition as claimed due to the fact that similar compositions have been made with different phytases, as evidenced by Cheng et al. Thus, contrary to applicant's assertions, Dr. Barton's declaration is not deemed sufficient to overcome the instant rejection.

23. Claims 8-13, 19, 24-31, 33-40, 50-53, 56-57, 60-65 were rejected under 35 U.S.C. 103(a) as being unpatentable over Apajalahti et al. (GB 2316082 A, published 2/18/1998) in view of Greiner et al. (Archives of Biochemistry and Biophysics 303(1):107-113, 1993; cited in the IDS), and further in view of Cheng et al. (U.S. Patent No. 5939303 filed on 11/6/1996, issued 8/17/1999; cited in the IDS).

24. As indicated above, in view of applicant's submission, priority has been granted to the filing date of parent application No. 08/910798 (8/13/1997). Since Apajalahti et al. is no longer available as prior art, this rejection is hereby withdrawn.

Double Patenting

25. Claims 8-14, 19-20, 23, 26-31, 33-41, 44, 46, 50-55, 64, 66 remain rejected and new claims 67-68, 71 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 6-7 of U.S. Patent No. 6110719. This rejection has been discussed at length in the Non Final action mailed on 5/18/2005 and the Final action mailed on 1/11/2006. It is applied to new claims 67-68, 71 for the reasons of record as they encompass subject matter which has previously being indicated as being obvious over claims 6-7 of U.S. Patent No. 6110719.

26. Applicant has indicated that a terminal disclaimer has been submitted to overcome the instant rejection. However, no terminal disclaimer has been found in the response filed by applicant on 7/11/2006. Thus, this rejection is maintained for the reasons of record.

27. Claims 21-22, 24-25, 48-49, 56-58 remain rejected and new claim 72 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 6-7 of U.S. Patent No. 6110719 in view of Cheng et al. (U.S. Patent No. 5939303 filed on 11/6/1996, issued 8/17/1999; cited in the IDS). This rejection has been discussed at length in the Non Final action mailed on 5/18/2005 and the Final action mailed on 1/11/2006. It is applied to new claim 72 for the reasons of record as it encompasses subject matter which has previously being indicated as being obvious over claims 6-7 of U.S. Patent No. 6110719 in view of U.S. Patent No. 5939303.

28. Applicant has indicated that a terminal disclaimer has been submitted to overcome the instant rejection. However, no terminal disclaimer has been found in the response filed by Applicant on 7/11/2006. Thus, this rejection is maintained for the reasons of record.

29. Claims 8-14, 19-28, 30-31, 33-41, 44, 46, 48-49, 50-58, 64, 66 were provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 5,

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23-28, 30-31, 40-49 of copending Application No. 10/601319. This rejection has been discussed at length in the Non Final action mailed on 5/18/2005 and the Final action mailed on 1/11/2006. In view of Applicant's amendment filed on 5/1/2006, canceling claims 5, 23-28, 30-31, 40-49 of copending Application No. 10/601319, this rejection is hereby withdrawn.

30. Claims 8-14, 19-20, 23, 24, 26-31, 33-41, 44, 46, 48-49, 50-58, 64, 66 remain provisionally rejected and new claims 67-68, 71-72 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-15 of copending Application No. 10/933115. This rejection has been discussed at length in the Non Final action mailed on 5/18/2005 and the Final action mailed on 1/11/2006. It is applied to new claims 67-68 and 71-72 for the reasons of record as they encompass subject matter which has previously being indicated as being obvious over claims 1-15 of copending Application No. 10/933115.

31. Applicant has indicated that a terminal disclaimer has been submitted to overcome the instant rejection. However, no terminal disclaimer has been found in the response filed by applicant on 7/11/2006. Thus, this rejection is maintained for the reasons of record.

32. Claims 8-14, 19-20, 23, 26-31, 33-41, 44, 46, 50-55, 64, 66 remain provisionally rejected and new claims 67-68, 71 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 88, 96, 103 of copending Application No. 11/056354. This rejection has been discussed at length in the Non Final action mailed on 5/18/2005 and the Final action mailed on 1/11/2006. It is applied to new claims 67-68, 71 for the reasons of record as they encompass subject matter which has previously being indicated as being obvious over claims 88, 96, 103 of copending Application No. 11/056354. It is noted that claims 89 and 97-102 of copending Application No. 11/056354 have been canceled in an amendment filed on 6/27/2005.

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33. Applicant has indicated that a terminal disclaimer has been submitted to overcome the instant rejection. However, no terminal disclaimer has been found in the response filed by applicant on 7/11/2006. Thus, this rejection is maintained for the reasons of record.

34. Claims 21-22, 24-25, 48-49, 56-58 remain provisionally rejected and new claim 72 is provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 88, 96, 103 of copending Application No. 11/056354 in view of Cheng et al. (U.S. Patent No. 5939303 filed on 11/6/1996, issued 8/17/1999; cited in the IDS). This rejection has been discussed at length in the Non Final action mailed on 5/18/2005 and the Final action mailed on 1/11/2006. It is applied to new claim 72 for the reasons of record as it encompasses subject matter which has previously being indicated as being obvious over claims 88, 96, 103 of copending Application No. 11/056354. It is noted that claims 89 and 97-102 of copending Application No. 11/056354 have been canceled in an amendment filed on 6/27/2005.

35. Applicant has indicated that a terminal disclaimer has been submitted to overcome the instant rejection. However, no terminal disclaimer has been found in the response filed by applicant on 7/11/2006. Thus, this rejection is maintained for the reasons of record.

Conclusion

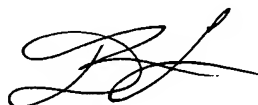
36. No claim is in condition for allowance.

37. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

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you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

38. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Delia M. Ramirez whose telephone number is (571) 272-0938. The examiner can normally be reached on Monday-Friday from 8:30 AM to 5:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dr. Ponnathapura Achutamurthy can be reached on (571) 272-0928. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-1600.



Delia M. Ramirez, Ph.D.
Patent Examiner
Art Unit 1652

DR
September 26, 2006